SL-II MC924/1
Time: 05:55 CDT, 20:10:55 GMT
6/13/73

PAO This is Skylab Control at 10 hours 56 minutes Greenwich mean time. We're planning to wake up the crew during a current pass over Ascension Island within about the next 4 or 5 minutes. CAP COM Hank Hartsfield will be putting in the call. The planning shift, headed by Flight Director Neil Hutchinson, is in the process now of getting last minute pads ready to feed up to the space station on the teleprinter. And we're receiving good solid data on the Skylab Space Station at this time by both coolant loops continuing to function normally and no outstanding problems at the moment. The crew will have an active day of medical and ATM experiments again today and will have an early EREP pass, EREP pass number 10. The planned 32-minute pass today will extend from west of the Washington coast and cross over Vancouver Island; the Rocky Mountains; Wyoming; Kansas; Memphis, Tennessee; also the Kennedy Space Center; and out over Haiti, Venezuela and finally Brazil. Information gathered will aid in sea-state prediction studies - also the definition of cloud characteristics of the Pacific coastal area. It will be used for geologic mapping of Wyoming and adjacent regions - also surface water assessment in Kansas, and it'll be used for land-use mapping of the Kennedy Space Center area. Also investigators will use the data for hydrological studies of Tampa Bay and regional land resources studies of Brazil. We'll have television coming in at - beginning at 12:55 Greenwich mean time or 7:55 central daylight time. This will be TV that was recorded yesterday on the onboard video tape recorder of the M551 metals melting experiment. And also, beginning at Goldstone acquisition at Greenwich mean time 13:44, we're scheduled to get an additional live pass of EREP television through the view finder tracking system, coming down across the United States out over the Caribbean and on across South America, where we have acquisition. Major Flight Plan activities scheduled for today include Apollo telescope mount ATM experiments, also M092 and M171 medical experiments. The M092, M171 subject will be Science Pilot Joe Kerwin. The observer for those experiments will be Commander Pete Conrad. ATM duties will be shared by all three crewmen. We'll also have M131 runs with Science Pilot Joe Kerwin as the subject and Pilot Paul Weitz as the observer for the otolith function test, using the rotating litter chair. And a fairly full schedule of housekeeping, personal hygiene periods set aside for each of the crewmen and physical training periods. We're now 5 minutes from the time we'll be losing contact over Ascension.

CC Skylab, Houston. Good morning.

SC Hello.

CC How's it going this morning? We've got about 5 minutes left here to Ascension.

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SC Okay, we're on our way.
CC Skylab, Houston; about 30 seconds from LOS; Carnarvon at 31.

END OF TAPE

SL-I[illegible] MC-925/1
Time: 06:06 CDT, 20:11:06 GMT
6/13/73

PAO This is Skylab Control. We are out of range now of Ascension, and we will be acquiring again in 23-1/2 minutes as Skylab passes over the Honeysuckle Creek, Australia, Tracking Station and Carnarvon, Australia. The spacecraft now on the 430th Earth revolution. And the crew being awakened this past pass over Ascension by CAP COM Hank Hartsfield. The flight director on this shift is Neil Hutchinson. At 11 hours 8 minutes Greenwich mean time, this is Skylab Control.

END OF TAPE

SL-II MO-926/1
Time: 06:30 CDT, 20:11:30 GMT
6/13/73

PAO This is Skylab Control, at 11 hours 30 minutes Greenwich mean time. Skylab in its 430th revolution, and we're about 1 minute away from acquisition through the Carnarvon, Australia Tracking Station.

CC - - 10 minutes.

CDR Hi, Dick.

CC Good morning.

CDR Good morning.

CC Skylab, Houston. We're about 1 minute from LOS, Honeysuckle, Hawaii will be coming up at 55. And we've got all the pads up except the odds and ends and the general message on the WLC-TV.

SC Roger.

CDR What did your pad-senders do, take the night off last night?

CC Well we had a little trouble getting them all together last night, Pete.

PLT He's just being smart.

PAO This is Skylab Control. We're out of range now, of the Honeysuckle Creek, Australia, Tracking Station. The next station to acquire will be Hawaii in about 13 minutes. And the crew is getting organized and up and about, ready for the first major activity of the day, an EREP Pass, which will occur on the 431st revolution and on into the 432nd. This will be ground track 5, a 32-minute pass that extends from west of the Washington Coast and on over the north central United States, down across the Kennedy Space Center, down over the Caribbean, the Island of Haiti, and then on across Venezuela and Brazil. At 11 hours 43 minutes Greenwich mean time, this is Skylab Control.

END OF TAPE

SL-II MC-927/1
Time: 06:54 CDT, 20:11:54 GMT
6/13/73

PAO This is Skylab Control at 11 hours 54 minutes. And Skylab now coming up on the Hawaiian Tracking Station.

CC Skylab, Houston through Hawaii for 2-1/2 minutes.

SC (Garble)

CC Skylab, Houston. We're about 30 seconds from LOS; Goldstone at 07.

SC Roger, babe.

PAO This is Skylab Control. That's all through Hawaii, and we'll be up again in about 6 minutes for the acquisition at Goldstone, California.

END OF TAPE

SL-II MC928/1
Time: 07:07 CDT, 20:12:07 GMT
6/13/73

PAO This is Skylab Control. Now we're about to acquire at Goldstone, California with Skylab in its 430th revolution coming across the continental United States and out over the Atlantic on it's 432 - 431st revolution. This is our next pass prior to the EREP pass.

CC Through Goldstone 5 minutes.

SPT Houston, SPT.

CC Go ahead.

SPT I'd like the photo people to recommend DAC settings for me to shoot up transporter 06 out the window during the EREP pass. Over.

CC Roger. We'll work on it.

CDR Hey, Hank, for the M551 people I've left that tank sit on vent all night and that's the first time the readings have really been good, it's perked up. In fact just supposed to - I don't know what it was - the motors or something must have been getting through one heck of a lot of outgassing all day yesterday. I've got a good hard vacuum in there this morning 0.01.

CC Roger, sounds good.

CDR Yeah, well all the welding was done between 0.1 - right around 0.1. But this morning for the first time I got a 0.01.

CC Pete, while we're talking about it, we've got a troubleshooting procedure that we are working up on this EV gun and we're going to get that up to you sometime this morning and we'll do that in place of your 551 terminate.

CDR Good. Well, I'll tell you what we've done. We've got a 5 by 2 wheel in there right now, and if the trouble-shooting procedure is successful we'll go ahead and do the wheel, make the ball bearings.

CC Skylab, Houston, we're about 10 seconds from LOS. We'll be coming up on Mila at 15.

END OF TAPE

SL-II MC-929/1
Time: 07:14 CDT, 12:12:14 GMT
6/13/73

CC Skylab, Houston through Mila 7 minutes.
SC Roger.
CC CDR, Houston. We'd just like to verify. You did say you had (garble) and wheel installed, didn't you?
CDR Yes, sir, and it's been a hard vacuum, 0.01.
CC Okay. That'll fit in with our trouble-shooting all right.
SC Let's see you get that up to us.
CDR Will you tell me what it is now? I think we've got a few minutes.
CC I haven't seen it myself, yet. All I know is, it just got in from Marshall, and the guys are looking over it. And we hope to have it up to you by 14:00.
SC Yeah. That's working fine.
CC Skylab, Houston. One minute to LOS; Ascension at 35.
PAO This is Skylab Control at 12 hours 27 minutes. And we're out of range now of the Bermuda Tracking Station; about 8 minutes away from acquiring at Ascension Island. Skylab now in the 431st revolution of Earth. And on this revolution, toward the end of the 431st and on into the 432nd, we'll have our 10th EREP pass of the mission. This, the next to the last Earth resources pass, will include an unusual dawn data take at the Pacific Ocean site, more than a thousand miles west of Vancouver, British Columbia, at the northern most point beneath Skylab's orbit. The Skylab Earth resources experiment package sensors are turned on over the ocean at 8:42 a.m central daylight time. The remainder of the data will be acquired beginning over the Rocky Mountains just south of Helena, Montana at 8:48 a.m. From this point to the conclusion of the pass, some 7400 miles to the southeast, the space station follows ground track 5 and 6. The pass ends about 350 miles east of Rio de Janeiro, Brazil at 9:14 a.m. central daylight time. Today's pass includes two studies of severe storm conditions in the Mississippi, Alabama area. Most of the sites in the midwest are under 40 to 70 percent cloud cover. And some totally cloud covered in the northwest and southeast, which may limit the amount of information successfully gathered during the extended pass. We have a weather map and some site information on the ground track on our TV monitor at the present time, showing the areas of data collection. Two Florida cities, Tampa and West Palm Beach, are to be surveyed as part of an extensive program to measure growth and changes in urban areas since the 1970 census. Among the specific sites to be covered are the Yellowstone Park area of Wyoming, Montana, and Idaho. And we do show some fairly heavy cloud cover in that area. The Powder River Basin and

SL-II MC-929/2
Time: 07:14 CDT, 12:12:14 GMT
6/13/73

northeast Wyoming and southeast Montana. Also (garble) Nebraska area and the Orlando, Florida area. During the portion of the EREP pass over the continental United States, the crew will be using the view finder tracking system with the TV camera attached. We expect to be getting television pictures down across the northwestern, central, and southeastern United States and out over the Caribbean. The data gathered on this EREP pass will be used in sea-state prediction studies, definition of cloud characteristics of the Pacific coastal area - also geologic mapping in Wyoming and adjacent regions. Surface water assessments will be made in Kansas. And land-use mapping will be done at the Kennedy Space Center area. Also, Tampa Bay hydrological studies and regional land resources studies will use the data collected on this pass. The hydrological studies of Tampa Bay and the land resources studies taking place in Brazil. At 12 hours 31 minutes Greenwich mean time, this is Skylab Control.

END OF TAPE

SL-II MC930/1
Time: 07:33 CDT, 20:12:33 GMT
6/13/73

PAO This is Skylab Control. We're about to hear from the crew over Ascension Island. We'll bring up the lines for the live communications from that Ascension pass beginning in about 1 minute.

CC Skylab, Houston through Ascension for 5 more minutes. And for info, we're configuring your rate gyros for the daytime configuration. And SPT, I got your photo settings for you.

SPT Go ahead.

CC Okay, if you plan to shoot that thing out the window totally, in other words no inside shots, use f/5.6 at 1/250; if you're going to mix up outside and inside, use f/11 at 1/500.

SPT Okay, Hank. This one will have to be a mix. I'd like to have a pure 400 footer dedicated to EREP pass tomorrow, if they can see fit to do it. I think it'd be good photography.

CC Okay, so then for your mix then, you want to use f/11 at 1/500.

SPT I got you.

CC You are using transporter 07. Is that correct? On DAC 6?

SPT No, sir. This is transporter 06 which we're to shoot up. That's just the one we were to shoot up last night.

CC Okay, let us take a look at that.

CC SPT, Houston. I think we finally understand what's happened here now. You haven't rethreaded; so the f/11, 1/500 is a good setting to run that out, and then you'll rethread for later today. Is that correct?

SPT That's correct.

CC Skylab, Houston. We're about 40 seconds from LOS. Carnarvon will be coming up at 06.

PAO This is Skylab Control. We've had loss of signal now through Ascension, and we'll be acquiring in 23 minutes at the Carnarvon, Australia Tracking Station as the spacecraft comes up over Australia and the Pacific at - on the 431st revolution and toward the start of EREP pass number 10. We have the weather map up again on the TV monitor, which shows you graphically the areas of heavy cloud cover, beginning up in the northwest over the Montana, Idaho, and Wyoming area. And we have an area showing 8/10 to 10/10 cloud cover, which is essentially a solid overcast - 80 to 100 percent cloud cover. Then on across the - following the ground track down across the midwest Rocky Mountain states and then into the southeastern corner of Kansas, on across Missouri, we first enter an area of about 40 to 70 percent cloud cover and then again pick up the solid overcast beginning in southeast Kansas and

SL-II MC930/2
Time: 07:33 CDT, 20:12:33 GMT
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Missouri and continuing on pretty much solid overcast through the southeastern United States with areas - breaking out into areas of 40 to 70 percent cloud cover. And then clearing somewhat over Florida - 40 to 70 percent cloud cover there - scattered to broken clouds in that area. So that we do have a fair amount of cloud cover on today's EREP pass over the continental United States but with areas of scattered to broken clouds in the Rocky Mountain and central states. At 12 hours 44 minutes Greenwich mean time, this is Skylab Control.

END OF TAPE

SL-II MC-931/1
Time:08:04 CDT, 20:13:04 GMT
6/13/73

PAO This is Skylab Control at 13 hours 4 minutes Greenwich mean time, with Skylab coming up on Carnarvon, Australia. And we'll have acquisition through Carnarvon for about 11 minutes. At the present time, we're receiving television which was dumped earlier during the day at a series of continental U.S. ground stations, - Goldstone, Texas, and Mila, - and is being fed into the Johnson Space Center and released at this time. The TV is of the M551 experiment performed yesterday. And we've seen Commander Pete Conrad place the metal disc to be welded in the M551 facility, in the chamber. At the present time, we're also seeing console operations. There will be some overlap in the coverage from each of these stations, so that you will see, as these pieces of television come in, some repetition of the activity. We've had a shift handover in Mission Control. Flight Director Phil Shaffer has replaced Flight Director, Neil Hutchinson. And the CAP COM coming on duty is Astronaut, Dick Truly, replacing Astronaut, Henry Hartsfield.

CC Skylab, Houston. Be advised, we see a small problem in the Nz in the star tracker. We're going to be - ESCO is going to be commanding star tracker out of gimbal backup on our next pass.

SC Roger.

SC Where've you been? How was leave?

CC It was great. It's also great to finally get on the day shift and talk to you guys at a normal hour.

SC Yeah. I was wondering about that.

CC It's been tough.

CC Skylab, Houston. We're finished our commanding to star tracker and it looks like we're in good shape now.

SC That's your story, huh?

CC Roger.

SC Don't tell me you've been on vacation. Tell him you've been running launch shifts with Captain B.

CC Not true.

SC Houston, SPT.

CC Go ahead, SPT.

SPT Couple things on the Earth terrain camera. Number 1, I had a peculiar funny, which I'll just repeat for information. Maybe it's explainable. When I first attempted to turn power on the camera, I did not get full operation. I got the green light, but no noise and no ability to move frames through. And I still do not know what the matter was, but I finally fixed it by opening and then closing again to all three circuit breakers on the inverter, at which time I heard the inverter come on. And

it was not on previously. But it's okay, now. The other thing on the ETC is that there is still a loud hiss when I hook the vacuum hose up to this particular film cartridge. And I'm going to make the run without the vacuum hose. Over.

CC Roger, Joe. Copy.

SC (Garble)

SC Also, I think transporter 05 was jammed - really, really, because I ran the ETC prep with that transporter with the END OF FILM light on and all that stuff, and when I got done, the frames - the percentage used was the same as it has been when I started. We'll tear it down later.

CC Okay, Joe. Just let us know when you do.

SPT Okay.

END OF TAPE

SL-II MC932/1
Time: 08:12 CDT, 20:13:12 GMT
6/13/73

CC Skylab, Houston; we're about a minute from LOS at Carnarvon. We're going to have a short break and see you at Guam at 13:19. We're going to be dumping the data tape recorder at Guam, and be advised after the EREP pass and you get back to solar inertial, there is about 11 minutes from the time you're in solar inertial and sunset and we'd like to make sure you try to reacquire the star with the star tracker during that period.

CDR We'll give her a bloddy go.

CC All righty, see you at Guam.

PAO This is Skylab Control at 13 hours 17 minutes with Skylab now in between the Carnarvon, Australia Tracking Station and the Tracking Station on Guam Island and it'll be about a minute and 45 seconds before we reacquire through Guam. And we're continuing to receive a combination of ATM and video tape recorder television which has been downlinked from the Skylab to ground stations being brought into Mission Control Center at this time. At the present time we're looking at ATM video. Prior to the ATM video we were looking at the M551 experiment activities and we saw the metal disk placed in the experiment chamber and we saw a sequence as the disk was removed from the chamber after the metals melting experiment had been completed and you could clearly see the melted or weld area on the disk. The disk will be returned and evaluated to determine the behavior of melting metals in a space environment in zero g and vacuum conditions. We're about 10 seconds from acquisition now at Guam. We'll stand by for Dick Truly's call to the crew.

CC Skylab, Houston; Guam for 10 minutes.

PLT Hello.

PLT Roger, Dick. We don't have TV through Guam today, do we?

CC Stand by.

PLT I've got the Moon on the VTS that's why I was wondering if you had TV - I'd give you a shot at it. Otherwise I'll put them on 2 minutes on the VTR.

CC Answer is negative, Paul. No TV until Goldstone.

PLT Okay, we've got about 2 minutes of the Moon on the VTR.

CC Okay.

END OF TAPE

SL-II MC-933/1
Time: 08:20 CDT, 20:13:20 GMT
6/13/73

CC Skylab, Houston. Be advised we're powering down the MDA wall heaters and CBRMs 3 and 15 in preparation for the EREP pass. No action required.

SC Okay.

CC Skylab, Houston. We're about a minute from LOS. We're going to see you at Goldstone at 13:44.

SC See you.

CC Okay.

PAO This is Skylab Control. Our next station to acquire will be Goldstone, California, in 13-1/2 minutes. And at that time we'll be into EREP pass number 10. During the pass over Guam, we had an indication that the startracker, which is used to provide attitude information for the EREP pass and used as an attitude reference in getting the workshop into the proper attitude, the Z-local vertical attitude, was providing an improper angle to the computer. Possibly the startracker had acquired or hung up on a bit of debris instead of tracking the desired star. In any event, the backup procedure was fed in, which is to provide the angle that the startracker should be providing automatically. This input from the ground was successfully entered, and the workshop should be maneuvering automatically to the desired Z-local vertical attitude at this time, and will be in attitude for the EREP pass. At 13 hours 32 minutes Greenwich mean time, this is Skylab Control.

END OF TAPE

SL-II MC934/1
Time: 08:41 CDT, 20:13:41 GMT
6/13/73

PAO This is Skylab Control at 13 hours 42 minutes Greenwich mean time and at this time the crew aboard Skylab should be turning on their instruments for Skylab EREP pass number 10. We'll be acquiring through Goldstone California in about 2 minutes. This will be a 32 minute pass extending from west of the Washington coast - crossing over Vancouver Island, the Rocky Mountains, Wyoming, Kansas, Memphis, Tennessee, down over the Kennedy Space Center - out over the Gulf of Mexico in the Caribbean - across Haiti, Venezuela and Brazil. And as mentioned previously there is significant cloud cover in the northwest about - northwestern United States about 80 to 100 percent almost solid overcast, giving way to scattered or broken cloud conditions of 40 to 70 percent cover across the Rocky Mountain States and down over the central U.S. and then picking up heavy cloud cover again in the southeast and also fairly heavy cloud cover over portions of south America. We're expecting to get television through the viewfinder tracking system during this EREP pass and among the view finder tracking system targets will be Turtle Creek Reservoir which is on the Kansas-Nebraska border. The crew also will be looking at anvil cloud tops in southern Iowa and on across Tennessee and they're scheduled to gather data, through the VTS, of Nassau in the Bahamas. They'll also be doing nadir tracking over the water in the Gulf of Mexico. We're less than a minute now from acquiring signal. And we'll be standing by for acquisition and video. We do have a signal now and television picture coming in through the viewfinder tracking system.

CDR Four minutes. Mark. Standing by. 34 minutes. Mark. Standing by for 45.

CC Skylab, Houston. We're AOS at Goldstone. We've got Television. No response required. Looking good.

CDR Roger. How do you read, Houston?

CC Loud and clear.

CDR Okay.

SC Are you going to command the tape recorder on when you need it Dick, or do you want us to turn it on first?

CC Skylab, Houston; we'll take care of it from the ground.

SC Okay.

CDR Captain Video strikes again.

SC 8, 9, MARK, Polarization 4. Standing by for a 191 ready light. 4,3, 1, DAYLIGHT. Bravo 7 reads 30.

SC For your information Houston that VTS is looking (garble) just 54 degrees ahead.

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Time: 08:41 CDT, 20:13:41 GMT
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CC Thank you.
PAO Skylab crossing over Washington state at this time.
SC 1, 2, 3, 4, 5, 6 altimeter to STANDBY.
SC MARK 46 26, polarization 1.
PLT Dick, I couldn't find Jupiter and I don't have time to look anymore.
CC Roger, copy.
CDR Okay, I have a scatterometer X-mitter light.
CDR 4, MARK. S190 MODE AUTO. Joe, on stand by for 48 ETC AUTO.
SC MARK ETC AUTO. 46:10 MODE READY or 92 and I have tape motion light.
SC Wonderful.
SC Houston, you got any later reports on the weather in the Bayonett Kansas area. Is it any better than the 8/10 (garble)?
CC Stand by just a second. I'll get the latest update.
SC Okay. There's no rush, Dick. No sweat. It's either good or it's not. I'm just curious.
CC Skylab, Houston; no change in the weather. It still looks about 8/10th cloud cover.
SC MARK 49:16. The altimeter is ON. I have no ready light on the altimeter.
SC ALTIMETER to STANDBY. Mode check on 92. SCAT ON - RAD ON.
SC Okay, that's where it's supposed to be, Houston. It doesn't look too good, does it?
CC It sure doesn't.
SC Well, gee, it's still looking at a couple of holes in the clouds, huh? (Laughter) What holes? Oh my.
PAO Weitz is looking for Turtle Creek Reservoir. On the Kansas-Nebraska border, but not having much luck penetrating that cloud cover.
SC Okay, SCAT ON to STANDBY and RAD to STANDBY. S193 to 0.
SC That's pretty solid (garble), Dick.
SC SCAT's ON, RAD's ON.
SC Well. Better than that does it.
SC Hey, when you want to a thunderstorm you can never find one.
CC Sorry about that.
SC MARK. SCAT STANDBY, RAD STANDBY. Altimeter is ON. I have a READY light. And I can reconstruct. I made a discovery back there and I can tell you what happened.

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Time: 08:41 CDT, 20:13:41 GMT

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SC Going after (garble) power in cue, Dick.

END OF TAPE

SC - - and I can reconstruct. I made a mistake back there, and I can tell you what happened - -
SC I'm going (garble) that power and (garble), Dick.
CC Understand.
SC There were no (garble) in the area. No good CBs.
CC Roger, PLT. - -
SC Okay. S190 to (garble). There (garble) a little (garble)
SC Looks like the whole U.S. is clobbered today.
SC Okay, 92 to MODE READY. Tape looks good.
SC Okay. For the EREP folks - Back there where I was supposed to originally put the altimeter to STANDBY, (garble) put the SCAT to STANDBY, and that goofed up the cycle there. Goofed up the warm-up time on the altimeter, too It's just that one part in there. Also caused the SCAT TRANSMITTER light.
CC Roger, CDR.
SC I'm not sure where we are here, Dick.
CC Stand by; I'll tell you.
CC Skylab, Houston. It looks like you're probably overhead Alabama now and coming up toward the Florida Panhandle.
SC Okay. Can't see much through these clouds. Boy,(garble) there's some now It' ' beach. That's why it stands out so good. There's the Cape under the clouds there. I see the Cape.
SC SCAT's ON; RAD's ON.
SC There's a Titan complex, I think, Dick.
CC Roger, Paul. We see it.
SC (garble) out of the clouds, I guess. Hey there it is. I'd rather get back to the business at hand.
SC Okay. Coming up on some shallow water. Ought to be coming in the top of the screen pretty soon.
SC Do those reefs show up? Can you see them all right?
SC MARK Polarization 4.
SC SCAT STANDBY, RAD STANDBY. Altimeter's ON. MODE CHECK on 92. SPEED MEDIUM. ETC to STANDBY at 56:58, Joe. You've got about 30 seconds.
SPT Roger. It's cloudy here too.
SC Okay. There's Andrews. That ought to be NASA about there, Richard. I can hardly see it through the clouds, though.
CC Roger.
SC Well here's something. I'll get a (garble) clear area, about there. You see the difference it makes when you look through less and less haze? It really makes a difference

when you're trying to look out there 45 degrees, Houston.
CC Roger, understand.
SC S190 light's out, MODE's STANDBY. FRAMES GOING to FIX.
SC Okay. I'll give it a few shots there.
SC (garble). Quick answers from the EREP Gang. Do they want another site in the city or stay on the same one?
CC Say again, the question, PLT? And be advised we've secured the TV.
PLT Okay. Never mind, now, Dick.
SC Here's the tongue of the ocean, Houston, if you've got the recorder running, which you don't.
SC Here you go, the recorder's on.
CC Roger.
SC Standing by for 58:24, and the altimeter will be going to STANDBY. STANDBY. MODE 1, 58:45, looking for the altimeter ON again.
SC Okay. We can turn that off, now.
SC 58:45, the altimeter is ON. Joe standing by for 59:40 and the ETC to AUTO.
SC All right.
CC Skylab, Houston. The television and the VTR - Skylab Houston. The television and the VTR are yours for the TV 29 cleanup. Also if you have any problems locking on the star tracker, we'd recommend to bracket it to the larger numbers on the outer gimbal angle. We're about a minute and a half from LOS. We're going to see you at Carnarvon, at 14:46.
SC Bye. 59:40 ETC AUTO.
SC I got it.
SC Where are we?
SC Just passing the Dominican Republic, I think. Hispaniola.
SC What are we coming up on now?
SC Clouds. Well, cloud photography - - (garble) 23 MODE AUTO, 30 S192 to READY. MARK, READY. Tape looks good. At 55 the altimeter to STANDBY.
SC 55 MARK altimeter to STANDBY, standby for the 191 POWER at OFF,. 10, 2, 3, 4, MARK. POWER OFF, 078, 10, 11, 12, 13, 14, 15, 192 POWER is back ON. Check 92 190 altimeter to come ON. 6, 7, 8, 9, 1-Brady, the altimeter is ON. Standing by for READY out on S190 in 2 minutes. 6, 7, 8, 9, 2 minutes-READY OUT MODE STANDBY,
PAO This is Skylab Control, we've had loss of signal now through the Bermuda Tracking Station. This EREP pass will continue down across the northern part of South America and ends about 350 miles east of Rio de Janeiro, Brazil. A disappointingly large amount of cloud cover on that EREP pass. And we expect there will be areas of fairly heavy

SL-II MC-935/3
Time: 08:52 CDT, 20:13:52 GMT
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cloud cover South America, as well. Our next station to acquire will be Carnarvon, and that'll be 43 minutes from now. Our change-of-shift briefing with Flight Director, Neil Hutchinson, will begin shortly in the Johnson Space Center News Center Briefing Room, room 135. We'd estimate start-time on that in about 5 minutes from now. At 14 hours 3 minutes Greenwich mean time, this is Skylab Control.

END OF TAPE

-II MC936/1
me: 09:25 CDT, 20:14:25 GMT
13/73

PAO This is Skylab Control at 14 hours 25 minutes. We're still 20 minutes away from acquiring at Carnarvon, Australia. And we're ready at this time to begin a Change-of-Shift Press Briefing in the JSC News Briefing Room. We'll switch to the News Center at this time for that briefing.

D OF TAPE

PAO This is Skylab Control at 14 hours 51 minutes Greenwich mean time. During the Change-of-Shift Briefing, we accumulated a little over 4 minutes of tape conversation through Carnarvon, Australia. We have about 8 minutes remaining until we reacquire through Guam so we'll take this opportunity to replay the accumulated tape.

CC Skylab, Houston. Carnarvon for 5 minutes.

SC (Garble)

CC I've got a few little notes here to tell you guys that I saved up so I wouldn't bug you through the EREP pass. And so if you're in a listening mood, I'll pass them up to you during here at Carnarvon.

SC Okay. We're standing by. And Dick, the star tracker - I changed it to AUTO and then had to go to my little VTS - and it did lock on something - I put the (garble) the details on B channel.

CC Okay. I had a note here. One of the notes that I had here was that during the EREP pass, the star tracker, after you left it, did get a lock-on, and the gimbal angle trace indicates it probably was Jupiter. So we think we made out okay on that one.

SC Okay.

CC The next one I have is the update on the solar activity. We had - during the evening we had three X-ray events last evening and they had ganerally - were associated with the gradual rise - of (garble) and X-ray background, but no optical flares were seen. And we think the probable source of this activity was active region 37, which has been a big X-ray producer in past rotations and is still very complex at this time.

SC Yeah, we'll drink to that.

CC I'm snowed in a flurry of papers here to find my notes. The next one I have is that later on today we're going to be sending you a short general message on some procedures we'd like to accomplish in the command module essentially. We've been running for several days with the primary coolant loop going,. We've got a lot of thermal data. And prior to doing the power transfer, we'd like to switch to configuration where both CSM coolant loops are operating. To get some more thermal data, we're going to probably ask you to do this-oh, in a couple or three hours. It'll be about 5 or 10-minute task, and then we'll make a decision, based on the data today, as to whether or not we'll go back to this configuration prior to going to sleep tonight or in the morning.

SC Okay.

CC Next note I have was that during the evening we've been seeing some kind of steady degradation in the

L-II MC937/2
ime: 09:51 CDT, 20:14:51 GMT
/13/73

peration of airlock module transmitter alfa - the 10 watt
ransmitter. It's been giving kind of ratty data, particularly
t low elevation angles. However, this moment, we are still
ble to - with other transmitters and by managing them correctly
e're still able to get all our data so I'll just let you know
e're working that problem.

SC Keep up the good work.

CC We also had - during the evening we had glitch on the S055 (garble) unmanned operation, and we ost a couple of ATM passes with that experiment. However, e've troubleshot it. It's apparently working okay now and e don't think you'll have any problem today but if you do ave any kind of a problem you might let us know on that. nd I have one more note that I'd like to read to you real uickly. Incidentally we're about a minute from LOS. We're oing to see you at Guam at about 15:00. And this is we found n the tape recorder about the hemispherical darkening of the -alpha screen; we think that at one time the H-ALPHA tele- cope was pointed off Sun center prior to being zoomed in and slight burn in occurred while it was off center and it robably remained visible. We think that's what you saw. his is normal and we expect that minor burns will occur from ime to time, and they will wash off. And your channel B nformation is about 3 days old now. It may very well have ashed off. But, at any rate, we think if it hasn't already one away, it will.

SC What hemispherical darkening?

SC (Garble) you remember 3 days ago. ou're right. It did wash off.

CC Hey, okay. We're about to go LOS and e'll see you at Guam.

SC Roger.

PAO This is Skylab Control that brings us up to date on our tape replay and we'll be acquiring over Guam n about 3 minutes. We'll leave the line up for the Guam acquisition.

END OF TAPE

CC Skylab, Houston; we're at Quan for 3 min-
es.

SC Hi there.

CC Hi there.

CC Incidentally, Skylab, I see you've still
t about 8 more minutes of night time; so I imagine you could -
ght could listen a little bit. The only other note that I had,
ich you've already probably noticed in - was a mistake in
message we sent you this morning which was the general message
ll you about what the future flight plans were going to be
r the follow-on days. The mistake is that the mission days
, 25, 26 and et cetera are correct. However, starting with
y 25, the day of the year is incorrect; it ought to be up
one. And if you take a close look at the message, I think
u can figure out where the mistake is yourself. And we'll
st leave it at that.

SC (Garble).

CC Roger. That's right. Day 25 should be
6 and right on down the line.

SC (Garble).

SC Say, Dick, the pass onto the P552551
arble). Something internally must have happened in that
arble) because we started running it again when we had 0.01
cuum - a good hard vacuum in there. And after we ran the
ectronics for a while, we quit outrunning the gun, and we
d a great deal of difficulty in - you know, why did the gun
the ball bearing target - Because there's no doubt about it.
got shifted somewhere during the launch phase of the flight.
ere must - I don't know whether there's any electronics
ide the vacuum chamber itself on the gun, but there must be.
cause after it runs for a while, it just starts outgassing
ain, and we have a terrible time keeping a vacuum in there.
d something must be broken loose or cracked open in there
d - the outgas (garble) is electronically heated up for a
ile.

CC Roger, Pete. And they were listening
ere.

SC Well, that's the only thing I can think of.
cause sure enough the gage is right after (garble) stood all
ght. It reads 0.01 when you get good vacuum in there. But
en we let it sit all night with no juice on whatsoever. It
ft the thing in the vent mode and left the filament chamber
en, and it took all night. And after we ran for a while this
rning alining the gun up on the target, why it just started
tgassing again. And we're letting it suck itself back down
a good hard vacuum.

CC Rog. I understand. We're about to go LOS.
're going to see you at Goldstone at 15:21, and we are re-
eving now a general message that was sent up to you on a mal-
nction procedure for (garble) site 12. We'll see you at
ldstone.

SC Okay.

PAO This is Skylab Control. We appear to have
of signal now through Guam, and we're about 16-1/2 min-
s away from Goldstone, California. Skylab now in its 432nd
th revolution. Correction: 433rd. And during that pass
r Guam, Pete Conrad reported some difficulty with the M512
periment apparatus - the manufacturing in space experiment.
described the difficulty he was having in maintaining a
uum in the system while it was operating and suspected that
mething might be outgassing during operation, interfering
h the ability to hold a good vacuum. We'll be passing up
e procedures to troubleshoot that particular experiment,
an effort to determine what the nature of the problem is and
t might be done about it. At 15 hours 6 minutes Greenwich
n time, this is Skylab Control.

OF TAPE

-II MC-939/1
me: 10:19 CDT, 20:15:19 GMT
13/73

PAO This is Skylab Control at 15 hours 20 min-
es Greenwich mean time. And we're less than a minute now
om resuming radio contact with Skylab through Goldstone,
lifornia, for a stateside pass that'll take the spacecraft
rough the coverage areas of Goldstone and Texas. And then
'll have a - almost an entire revolution with no stations
ntacting until we come back around on Guam for a very low
evation pass at Guam. We'll have television coming in from
ound stations of Apollo telescope mount, ATM operations.
're in fact getting that video shipped in now. And this
deo is coming at the present time from Goldstone. We'll
so have some ATM video from Texas as well as television
at was dumped earlier of the S-55l experiment, the metals
lting activity. EGIL, the environmental systems engineer,
ports that our electrical power situation aboard Skylab is
changed. We're still getting a total capacity of about
00 watts out of the single solar panel on the airlock - on
e orbital workshop. And a 4000 watt capacity from the ATM
lar panels. And in point of fact, we're actually drawing
out 5000 watts of this 7000 watt capacity, roughly equal
ad sharing approximately 2500 watts out of each set of solar
nels, the workshop panel and the ATM cluster, with the ATM
luster tending to carry a little bit heavier share of the load.

CC - - next 13 minutes, and be advised we just
t a report of a new flare in active region 37.

CDR Roger, Houston. Are you ready for TV?

CC CDR, Houston. We have TV. We are going
o take it away for just a couple of minutes so we can dump
he VTR, and then we'll come back to it. But we - we do have
ood TV.

CDR Okay.

PAO And the TV we're getting at the moment is
he viewfinder tracking system looking at the Moon.

PLT It's a little bit jazzed up due to some trans-
orter jams. And I'm on channel B now, if those photo people
ant to try to get it early.

CC Okay. Thank you.

PLT Okay, apparently what the problem is is
e're having a - a fairly high incidents of jams. I think
his is our third or fourth one. We consider it high, anyway.
nd after you clear it and you run more film through, the
ransporter appears to function normally. Now, we've con-
ectured that maybe that emulsion - that something the heat
id something to it, because it does seem a little difficult
o pull film off the supply cassette. So it may be the fault
f the film rather than the transporters.

CC Roger. I understand.

MCC — PAO, did you -
SPT — Houston, SPT. Have any of these flares been class M or better?
CC — Stand by.
CC — Skylab, Houston. On these flares of - we have one in progress in 37, I just told you about; one also in active region 27. And the one in 27 is faint and we also don't think the one in 37 is going to get up to class M.
SPT — Roger; okay. We've had the alarm enabled all morning and the console is manned now, of course. Our PMEC count is not high. It's running around 300.
CC — Okay. Thank you.
CDR — (Garble)
CC — Skylab, Houston; be advised that we get the word from NOA that the activity that we reported in active region 37 on that small flare is finished.
SPT — All right.
SPT — That transmission coincided with our flare alarm for some reason.
CC — Roger.
SPT — The SPT and PLT are about to play face the music.
CC — I heard you were about to play, but I didn't hear what.
SPT — Face the music, we're doing M131 at our new rotation level.
CC — Roger.
SPT — I just hope my pant legs stay where they are - not whipped off by the wind blast at this speed.
CC — Hang on.
CDR — (Garble) SPT now.
CC — Affirmative. (Garble)
CDR — He's got another (garble) or two.
CC — Sorry, Pete, I didn't understand you.
CDR — I said you got enough H-alpha 2?
CC — That's affirmative. We'd like to go to WLC now.
CDR — Okay. Holler when you want me to rotate.
CC — All righty.
CC — CDR, Houston. You can go ahead and proceed with the rotation at your convenience now.
CDR — Okay. Would you like it at slow rate times 1, or slow rate times 2, or fast rate times 1, or fast rate times 2?
CC — Slow rate times 1, Pete.
CDR — Roger.

END OF TAPE

CC Skylab, Houston for your information we
e uplinking a message to you that is a malfunction procedure
M512 - for M551. However, based on your previous report,
te, we're reconsidering now whether or not to actually go
rough this malf procedure or not and we'll talk to you about
at at Vanguard. There is one point in the malfunction pro-
dure also that asks you to look at the filament glow and
're not real sure you could see that with the beam on. But
order to be able to cover all bets we're going to go ahead
d give you the message now and we'll talk to you a little
t later as to whether we'd like for you to perform it. You
y have already done most everything in the message for us.

CDR Okay, we'll thunk it over before we
art.

CC Okay, that probably helped. Probably if
u just had time to take a look at it you could probably
swer better than we could as to maybe where we ought to g
xt.

CDR Yeah, okay.

CC Roger.

CC CDR, Houston we've seen what we want now
this slow rate. We're willing now to go high rate times
and so we can, you know, get the rest of our downlink
.

CDR Okay, Houston for that (music in background)
garble).

CC Roger. We'll take XUV monitor now. Be
ivised we're about 45 seconds from LOS. We're going to see you
Vanguard at 15:46 and we're going to dump the data tape re-
order there.

CDR Okay, and here's the last shot (garble).

CC Sorry, Pete. We didn't copy that one.
ut we do have good television.

PAO This is Skylab Control. During that pass
ver the United States, Joe Kerwin advised that the crew was
oving ahead with preparations to perform the M131 - human
estibular function experiment. Sounded as if they would be
ea'y to begin that experiment somewhat ahead of the Flight
lan schedule. For the first run this morning the subject is
cience Pilot Joe Kerwin and the observer will be Pilot Paul
eitz. Those roles are reversed this afternoon when Weitz
ill be the subject and Kerwin the observer for the M131 human
estibular function, using the rotating litter chair to de-
ermine if there are any significant effects produced by
eightlessness on the vestibular function, the function of
he otolith and semicircular canals, which have a great deal
o do with spatial orientation. We're now 8 minutes from
egaining contact through the tracking ship Vanguard off the
oast of South America. At 15 hours Greenwich mean time this
s Skylab Control.

END OF TAPE

PAO Skylab Control. We're about to acquire through the tracking ship, Vanguard. We'll stand by for communications with the crew.

CC Skylab, Houston. We're AOS at Vanguard for 8-1/2 minutes.

SC Roger, Houston.

CC CDR, Houston. Realize you're in the middle of a daytime pass. I have a couple of questions that- for the M550 series people, that I'll just go ahead and read to you. And when you get a chance, if you do during this pass, you might give us a quick answer. One was - This morning did you use the nominal electron-beam gun procedures when you did the little run through that you described while ago? And secondly, was the plus 5 kV voltmeter reading less than 4? Over.

CDR The answer to the second question is it's reading more than 4. And the answer to the first question - Yes, we used the nominal procedures.

CC Okay. Good. We'll take those answers, and before you go LOS, we'll let you know whether we want you to do a terminate of M553.

SC I just can't do that troubleshooting procedure because other than not opening the CD power control (garble), but opening CD power (garble), we rechecked that problem last night, and everything else goes just the way this procedure should go to allow us to use the gun. Okay?

CC Okay, Pete. Stand by just a second.

CC Skylab, Houston. Be advised we've reconfigured after the EREP pass, and we've got the CBRM heaters and MDA wall heaters back on.

SC Okay.

CC Skylab, Houston. We're about a minute - 30 seconds from LOS. We're going to see you at Goldstone at 17:01. And Pete, we'd like you to do a M553, in place of the M551 terminate on your Flight Plan.

SC Will do.

CC Very good.

PAO This is Skylab Control. We've had loss of signal through the tracking ship, Vanguard. And we won't reacquire for 1 hour 4 minutes, until Skylab gets around to Goldscene on the 433rd revolution. At 15 hours 57 minutes Greenwich mean time, this is Skylab Control.

END OF TAPE

SL-II MC942/1
Time: 12:00 CDT, 12:17:00 GMT
6/13/73

PAO This is Skylab Control at 17 hours Greenwich mean time. We're 1 minute away from acquiring at Goldstone, California, after more than an hour of being out of station contact, while the things that we expect to hear from the crew, as we acquire, is a status report on the M553 experiment. The crew had been given some troubleshooting procedures for the 512 manufacturing and space equipment, and if they encountered no problems, they were to go ahead and press ahead with the M553 experiment, which is the sphere forming task. And we expect to get a report from them, as we acquire, as to whether or not they were able to maintain the desired vacuum in the facility and how the M553 experiment went.

CC Hello again, Skylab. We've got you at Goldstone for the next 5 minutes.

SC Goldstone! How about that. Okay.

CC Yes, sir, we - couple of items. We notice the star tracker is not locked up, and Ns appears to be bad. We think your bad on board is good. You might attempt to get a - acquire [illegible]n. Also, on the CALROC, we're - they're having trouble in the countdown with the main video. They're checking it out. The last I heard, we were 25 minutes and counting down. And if they don't have it solved at about 6 minutes, we'll hold there, and I'll get back to you on that.

SC Okay.

SC There is, what will be to the medical people, some interesting information on channel B regarding the SPT's M131 run.

CC Okay, biomed OPS are copied, and he'll be looking for that.

SC And here's the SPT himself saying that the wardroom window, Dick, is really bad. It's - what used to be our friendly ice crystal is now a friendly water drop surrounded by 3 inches of fog. And it seriously interferes with photography through that window. I wonder if the ground couldn't help us by either recommending that we vent the window or that we turn the heater off, to let it refreeze.

CC Joe, we copied that, and EGIL B is thinking about that one.

SC Thank you.

CC Also, from Pete, we'd be interested, if he's that far along, in how he made out with 553. And also, we're very interested in the color of the parasol. One more thing - I'm not sure when you'll have time to copy, but I've got a pointing update for Pete for a JOP 12 Bravo this afternoon.

SC Okay, while I'm getting my notebook out, all I can tell you is that I got the first two balls melted, and the first one ran down and made a perfect sphere on the stinger. It's one of the ones that's not supposed to come off.

then as it started to harden, it sort of got the shape of old balloon. The second one formed a pretty good sphere. third one came off the sting. About that time - I think got some problem with electronics heating up. At that ti ot to the fourth one, which is retractable (garble). And got lit and stopped firing about 1 second after it lit. my vacuum's degenerating again and was at the plate 1; so ust - letting everything cool down and let it outgass some e. I don't know where this outgassing is coming from, but t's obviously what it is. There must be something back re in that electron (garble) again. And I'm going to wait il I've got a good hard vacuum again and let the electronics l down and go back and do it some more.

CC Okay; copy.

SC And I'm ready to copy the pointing.

CC Okay. This is for JOP 12 Bravo, step 1, lding block 22, scheduled I think at 18:21. It's EL minus 0, U plus 550, R plus 600. And this is - the reason for s, Pete, is to clear that we've had some dispersion due changes in this filament 79, and this should give us some ter data.

SC Okay.

SC Hey, Houston.

CC Go ahead.

SC We just got around to putting those 0 desiccants in the (garble) today. How about reminding - how about giving me that 190 desiccant thing again about after tomorrow, will you please?

CC Roger; copy.

CC And, Skylab; Houston. We copy star tracker locked on and looking good. We're about 30 seconds from . Going to see you at Vanguard at 17:23, and we're going to p the data tape recorder there.

SC Okay, Dick, this is the SPT. During the , the parasol looked orange to me. If I hadn't known there a controversy, I wouldn't have thought it was faded. It have been faded a little.

CC What does it - I guess what we're interested is have you looked at it this morning and does it st.l k orange?

SC It's in there right now.

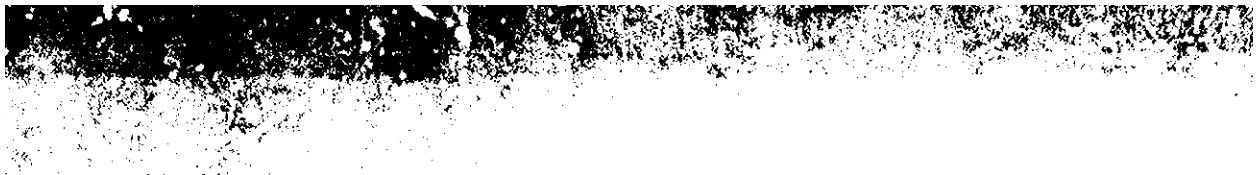
CC Okay, fine. We'll see you at Vanguard, e.

PAO This is Skylab Control. Skylab now out range of the Goldstone, California Tracking Station and ut 15 minutes away from Vanguard. During that pass over dstone, the crew was advised that there was a problem in

SL-II MC942/3
Time: 12:00 CDT, 12:17:00 GMT
7/13/73

The main video system on the calibration rocket scheduled to be launched from - in support of the ATM experiment, from White Sands, and that that countdown would continue to the minus 6 point and hold if the problem had not been resolved. We do not have any further information on that calibration rocket situation at this time. We'll pass further updates along as they become available. Joe Kerwin also reported that the wardroom window, which previously had an ice crystal about the size of a dime in the middle of it, had now - the ice crystal had apparently melted. There was a drop of water, which you said was surrounded by fog and was interferring with photo operations, taking photographs through the window, and a request that the ground try to come up with some sort of solution to that problem. Kerwin and Pilot Paul Weitz are both making runs in the rotating litter chair, as part of the M131 vestibular function and motion sensitivity studies. And both crewmen are running today at increased rates of rotation. For Science Pilot Joe Kerwin, his rate of rotation today was being increased from 12-1/2 revolutions per minute up to 20, and Pilot Paul Weitz was increasing the rate of rotation during the motion sensitivity runs from 15 to 25 rpm. At 17 hours 10 minutes Greenwich mean time, this is Skylab Control.

END OF TAPE



PAO This is Skylab Control at 17 hours minutes, about a minute away from acquisition at Vanguard. id during this pass over Vanguard, we expect to pass further date to the crew on the Cal Rocket, Calibration Rocket unch from White Sands. The ATM officer is checking on the tatus of that launch now. Calibration Rocket is launched to ther data used in calibrating the ATM experiments, Apollo lescope mount experiments, looking at the Sun. And we're out - Well, we have acquisition now. And we'll be receiving adio contact through Vanguard for about 10 minutes.

CC Skylab Houston. We're AOS at Vanguard. 're - Got a 10-minute pass here. Be advised, we've got a ubflare in progress in active region 37. We are in the ount on the Cal Rock, with about 3 minutes and 30 seconds to lft-off. It's GO.

SC Hey, keep us posted

CC Yes, sir. It'll ah - It'll lift off - should lift-off during this AOS, and I'll let you know.

CDR Okay.

CC Skylab, Houston. Cal Rock still in the unt. Less than 2 minutes left to go to launch. And, now, te, if you get a chance this time, you might let us know at you found when you looked at the parasol.

CDR Still looks the same to me, Dick. Orange, ut a little faded.

CC But it still has a definite orange color, uh? I talked to the guys on the phone while ago, and that's hat they were really interested in. It turns out that if t still has an orange color, then it's degrading slower than e had originally planned. Or at least slower than our tests ndicated that it might.

CDR Okay. I'm having my other expert to onfirm my look. He's going to look right now.

CC (Laughter). Rog. No problem.

CDR On that subflare I can see 18,000 on etector 3 and about 5 to 6 thousand on detector 1.

CC Roger.

CDR Can I say it's - I would say it's pretty uch open, (garble) can tell. Except one's about 3500 degrees garble).

SPT Dick, SPT.

CC Roger. Go ahead.

SPT Okay. I'm in the command module looking ut the window. And that corner of the parasol that we can ee, which is looking at the Sun, is white-orange. It's the olor of a Florida orange. Okay? Ready to [illegible].

CC Rog. Understand. Thank you much, Joe.
SPT Rog.
CC Skylab, Houston. Be advised on the Cal Rock. We've recycled the counts back to about 5 minutes. We're now at about - less than 4 minutes in counting. The recycle was due to winds. Also, the flare in active region 37 appears to be declining. We also see 2 more subflares in active regions 31 and 27.
SPT Okay, Dick, SPT. I looked at looked at those along with Pete. And was disappointed in that I could not identify the flare in either XUV monitor or in the X-ray.
CC Rog. Understand.
CC CDR, Houston. For your information, we're getting a command module coolant loop message up to you. We're going to try to get it up here at Vanguard. If not, we'll get it at Hawaii. We'd like to get it scheduled in your Flight Plan, in the housekeeping time at 19:20. If that's not convenient, just let us know as soon as it's practical to do that. And there's one part of that message that I might make a comment on, and that is - part of it is to withdraw about five clicks of command module water. And we suggested using a contingency fecal bag. However, if that doesn't seem feasible to you, we'll just leave it up to your own judgement. You might use a shower bag or whatever you think best.
CC (Garble)
CDR Okay.
CC Rog.
CDR What you want the water for?
CC It's ah - We've been - We've been taking a lot of thermal data, and it turns out that the water lines come out of - right beside the glycol lines as they come into the command module. And we'd just like to get a hack on the way our thermal model has been doing. In other words, when you first try that, it's a line - If you're able to draw any water at all, it means that it's not frozen and that gives us some idea of how good our analysis has been. We expect it may be frozen, in which case, when you - At the tail end of this procedure you'll get to try it again after we've warmed it up some.
CDR Okay. Well, of course I had ice down there for a while. Then once we put the fans back on again it started getting (garble).
CC Okay.
CDR I take that back. I got both ice and water down there now.
CC Okay. Understand.

SL-II MC-943/3
Time: 12:21 CDT, 20:17:21 GMT
6/13/73

CC Skylab, Houston. Be advised the Cal Rock has had a problem at about 8 seconds, they've racycled to 5 minutes, and are going to pick up the count as soon as possible. As far as far as flight planning today, we're going to assume the Cal Rocket is a GO. We're about 45 seconds from LOS, here. And we're going to see you at Hawaii at 18:32.

CDR 18:32, bye.

CC Bye, bye.

FAO This is Skylab Control at 17 hours 34 minutes. Our next station to acquire will be Hawaii. And that'll be 58 minutes from now. During the pass over Vanguard, Joe Kerwin reported the parasol sunshade as seen from the command module window appears to be still orange in color. He described the color as a light orange, about the color of a Florida orange, according to Kerwin. At 12:45 central day'light time, a little over 10 minutes from now, we'll have a replay of today's television. Television on the M551 experment. And during that replay, Mr. Jack Waite, who is the Corollary Experiments Manager, and head of the Marshall Space Flight Center's Experiments Office, will be available in the JSC News Center briefing room, room 135, to describe the experiment and answer questions. That will be at 12:45 central daylight time, about 10 minutes from now, in the JSC news center briefing room. At 17:35, 17 hours 35 minutes Greenwich mean time, this is Skylab Control.

END OF TAPE

SL-II MC944/1
Time: 13:30 CDT, 20:18:30 GMT
6/13/73

PAO This is Skylab Control at 18 hours 31 minutes. We're coming up on the Hawaiian tracking station about 45 seconds from now. We'll stand by for CAP COM Dick Truly's call to the crew over Hawaii.

CC Skylab, Houston. We're AOS at Hawaii for 7 minutes.

SC Roger, Houston. Be advised (garble) active (garble) in PB22 and it's got through two complete and hung up with filter 3 the third pass I've got 12 pictures. That's in process of running again and all. (Garble)

CC Roger, Adam copied that. Be advised incidentally that the cal rock was a resounding success and there is no pointing update required.

SC Okay.

SC I'm halfway through PB22.

CC Roger that.

CC And also Skylab 1 note for the we fix anything SPT, we'd just as soon he keep his hands off our weather because it's still raining like the dickens.

SC Okay.

SC In medical school they said it wasn't your success rate but whether you cared.

CC (Laughter) Roger.

CC Skylab Houston for your information the block data pad and the CSM coolant loop procedures for the CDR are onboard.

SC Okay. I just got a star tracker update finally and that left me about 184 out in roll plus from 7500 I'm actually at 7685.

CC Roger.

SC John I'd like to talk to (garble) I presume that's what they want me to do.

CC Say that last again, Pete.

SC I elected not to roll to 75 - I started out at 75. I didn't have a star tracker lockon. When I locked on I was actually at 7685 and I elected to stay there.

CC Roger. Stand by 1.

CC Skylab, Houston, affirmative. We'd like to stay locked on at that number of 7685.

SC Okay.

SC We're going to have to inform (garble) again on 56. It looks to me like it's hung up.

CC Roger.

CC CDR, Houston, we confirm on TM that S056 is hungup at that position and there is not anything we can do at the moment. We'll just lose a little bit of data so press on.

SL-II MC944/2
Time: 13:30 CDT, 20:18:30 GMT
6/13/73

SC Okay, gone to control lock.
CC Roger.
SC It took 8 pictures that time.
CC Roger.
CC Skylab, Houston; we're LOS in 30 seconds. We'll see you at Vanguard at 19:02 and we're going to be dumping the data tape recorder at Vanguard.
SC Okay.
SC (Garble) it centers around 300 but it's coming up to 450 - 500 every once in a while. (Static)
PAO This is Skylab Control at 18 hours 42 minutes, out of range now of the Hawaiian tracking station and the next station to acquire will be the tracking ship Vanguard in about 20 minutes. The X-ray telescope the S056 experiment as mentioned during that pass over Hawaii apparently again hungup. This has been a recurrent problem with particular experiment and is believed to be electro-magnetic interference of some sort that causes a triggering pulse to fail to get in and the experiment stops midway through a data take, in this particular case, after acquiring 12 frames of data it unaccountably stopped. And the assumption is that it will work properly the next time that it's activated with a certain probability that the interference problem could again occur and shut it down midstream so to speak but this has been an intermittent problem and that is not a serious concern. The instrument is gathering data but it's periodically interrupted in its data gathering. At 18 hours 43 minutes Greenwich mean time this is Skylab Control.

END OF TAPE

SL-II MC945/1
Time: 13:58 CDT, 20:18:58 GMT
6/13/73

PAO This is Skylab Control at 18 hours 59 minutes, just about 19 hours. And we're about 1-1/2 minutes away from regaining radio contact with Skylab through the tracking ship Vanguard. A few minutes ago Flight Director Phil Shaffer questioned each of his flight controllers as to their status reminding them that we have a long period without contact after we pass over the Vanguard asking everybody to review the situation of equipment experiments and vehicle systems in his area of responsibility with an eye to the fact that we will be out of contact for about an hour, until the spacecraft comes back around to the Hawaiian station. Hawaii and Vanguard tracking station are the only two stations acquiring Skylab at the present time. We're now about 15 seconds away from regaining radio contact. We'll stand by for CAP COM Dick Truly's call.

CC Skylab, Houston we're AOS at Vanguard for 9 minutes.

SC Houston.

CC Skylab, Houston we just can't stand but ask you, we noticed that M131 shutdown and VTR looks like you're completed. We just wanted to make sure that you are.

SC That's affirmative. And (garble) 25 and we're recommending that we both go 30 the last time we try.

SC I'll be the only one left up here. (Laughter).

CC Yeah, everybody is standing around with sort of an astounded look on their face and we copied your request.

SC They had the ATM guys thinking they had a subflare on 37 during the last half an hour or so. First time I've seen anything on X-ray.

CC Roger, stand by.

CC CDR, Houston. Negative we have not seen any flares of any kind in active region 37 in the last half hour.

SC Okay.

CC Skylab, Houston we're about a minute from LOS. We're going to see you at Hawaii at about 20:08 which is about an hour from now.

SC Roger. We got a look about 20 miles straight of Cape Horn, actually it's the first time the weather and the lighting has been such that we could even see down that way. We got a good look at it almost all the way to Cape Horn, but the last 20 miles was under overcast.

CC Roger, understand. I bet it was pretty.

SC It's all full of snow.

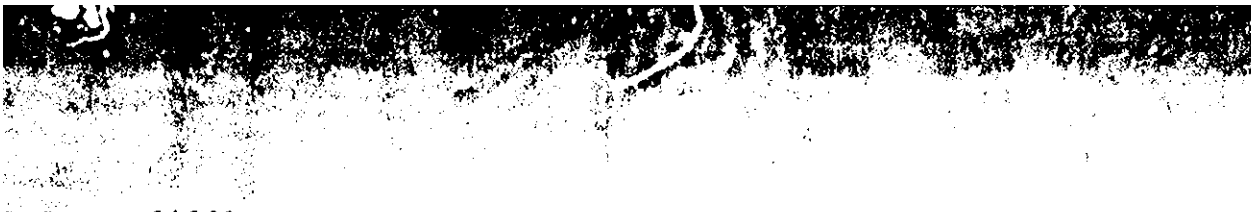
SL-II MC945/2
Time: 13:58 CDT, 20:18:58 GMT
6/13/73

SC I'll have that loop up for you when you come up the next time.

CC Okay, EGIL copies.

PAO And that appears to be all through Vanguard. We've had loss of signal now and as you heard CAP COM advise the crew it'll be about an hour until we reacquire at the Hawaiian tracking station. One interesting bit of information passed along by the crew on that pass over the tracking ship Vanguard, the results of the M131 runs that were completed ahead of schedule today by Science Pilot Joe Kerwin and Pilot Paul Weitz. This was to be a day where both crewmen increased their rate of rotation in rotating litter chair as a part of the motion sensitivity test. Science Pilot Joe Kerwin had previously been running at 12-1/2 revolutions and today that speed was upped to 20 revolutions per minute. Pilot Paul Weitz had previously run at 15 revolutions per minute, and today the speed was upped to 25 revolutions per minute, during which time each crewman moves his head from side to side and then back and forth in a prescribed manner in an attempt to determine at what level first sensations of motion sickness or uneasiness are induced. And both Weitz and Kerwin apparently had little or no sensation on today's runs, despite the increase in speed; and requested that the next time the runs be made, both crewmen run at a speed of 30 revolutions per minute. Kerwin also reported that Paul Weitz had 150 head movements at the relatively advanced speed of 25 revolutions per minute. We also heard Pete Conrad report that the crew had for the first time in the mission a very good view of the lower part or the southern part of the South American continent. Conrad reported they could see almost to Cape Horn, all but the last 20 miles, which was covered by clouds. At 19 hours 13 minutes Greenwich mean time, this is Skylab Control.

END OF TAPE



L-II MC-946/1
ime: 14:42 CDT, 20:19:42 GMT
/13/73

PAO This is Skylab Control; 19 hours 42 minutes reenwich mean time, with an advisory to the press. There ill be a medical experiments review at 3 p.m. today in uilding 1 in the News Center. Dr. Royce Hawkins and several f the principal investigators will be standing by to respond o questions from the press. Repeating, at 3 p.m. today in uilding number 1, Johnson Space Center, our News Center riefing Room, a medical experiments review with Dr. Royce awkins and associates. At 19 hours 43 minutes Greenwich ean time, this is Skylab Control.

ND OF TAPE

SL-II MC-947/1
Time:16:04 CDT 20:21:04 GMT
6/13/73

PAO This is Skylab Control Houston at 21 hours 4 minutes Greenwich mean time. During the past hour while the medical experiments review was underway the Skylab space station passed over three sites. They were in order, the Hawaii site, the Vanguard, and Ascension. We recorded about 3-1/2 minutes of air to ground during the pass over those three sites and will play that back to you at this time.

CC Skylab, Houston. Hawaii for 10 minutes.

CDR Hi there.

CC Hi there.

CDR Dick, I was able to draw water from the drain and (garble)

CC Okay, thank you much.

CC Skylab, Houston. We notice that you've been using the recorder, and we're a little we need to do a data recorder dump. Would that be okay with you?

CDR I just finished 92. head and dump it.

CC Roger, we got it. Thank you much.

CC Skylab, Houston. We're through dumping the experiment on the recorders. We're about 30 seconds from LOS. We're going to see you at Vanguard at 20:40.

CC Skylab, Houston. We're AOS at Vanguard for 7 minutes.

CDR Roger.

CC And we do have a data recorder dump planned for this pass, and if anybody's got time to look out a window, you're getting ready to get another pass over Cape Horn.

PLT Okay, thank you. Hey Dick, for ATM people, information. The performance of Building Block 13 with 82A (garble) didn't give us a READY light. I asked Peterbefore. Pete says that does do that on occasion.

CC Roger. Copy.

CDR Unfortunately Richard, darkness has moved over and I can just barely make out the land (garble)

CC Rog. Sorry about that.

CDR (garble)

CC Didn't quite copy that one. We can hear the bicycle riding in the background though, and Story and I are sitting here looking at it on the (garble)

CC Skylab, Houston. We're 1 minute till LOS. We're going to see you at Ascension at 20:56. And one note for the PLT. If you have a chance during this night period between ATM runs, you might whiz over to the S009 and change Beta angle for us on it to plus 5.

PLT Yes sir, (garble)

CC Roger.

SL-II MC-947/2
Time: 16:04 CDT 20:21:04 GMT
6/13/73

CC Skylab, Houston. We're AOS at Ascension for 4-1/2 minutes.

CDR Roger.

CC Skylab, Houston. We're about 45 seconds from LOS. We're gonna see you a long time from now at the Vanguard at 22:17, and we plan to dump the data recorder there.

PAO That completes the tape portion of the last track, that is the end of the 435th revolution, and the beginning of the 436th revolution. The crew during most of that time was involved in a medical experiment, identified as the M092, lower body negative pressure, and the M171, metabolic activity, where they ride the stationary bicycle, so to speak, or a bicycle device that's stationary. We'll acquire the Skylab space station again at the Vanguard tracking site in 1 hour and 8 minutes. Until that time, this is Skylab Control at 21 hours 9 minutes, Greenwich mean time.

END OF TAPE

SL-II MC-948/1
Time: 17:16 CDT, 20:2 :16 GMT
6/13/73

PAO This is Skylab Control, Houston at 22 hours 16 minutes Greenwich mean time. We're about a minute away from the Vanguard tracking station and we'll standby for the radio communication with the Skylab space station crew through Vanguard. Then we'll keep the line up through Ascension. We have approximately 10 minutes at each station for a pass.

CC Skylab, Houston. We're AOS at Vanguard for 10 minutes.

SC That was our equivalent of a Roger.

CC Roger.

CC That was my equivalent of a squeak.

SC Okay.

SC You really are on days, but I figure you don't get off at all. Is that it?

CC That's right.

CC Skylab, Houston. I have one note for the CDR this pass. In this evening's flight plan we'd like to delete housekeeping CM4. There are no more dumps required. In the command module, though, we would like, at your convenience to go up there and check hydrogen tanks one and two, fans and heaters all to AUTO.

SC Okay, H2 one and two, should be tank one and two, fan heaters to AUTO and we'll skip command module four.

CC That's right. That ought to be probably three switch throwings and one verify, but at any rate, they all end up in AUTO.

SC Okay. If you're wondering why I answered instead of Pete, we had a mutiny this afternoon and I've taken over.

CC Roger.

SC I've declared Skylab a U.S. Naval Hospital.

CC Okay, just keep us informed, Captain.

SC Roger.

SC (Garble)

CC Skylab, Houston, we're a minute and 15 seconds from LOS. We're going to see you at Ascension at 22:30. Your summary flight plan for tomorrow is onboard in the teleprinter. And the detailed flight plans are going to be uplinked at Ascension.

SC All right. Thank you.

CC Roger.

PAO During an earlier pass, the Commander, Pete Conrad reported that he had drawn water from the secondary loop and quote: "It looks fine", was his quote. That was an engineering experiment in the CSM, designed to improve the command module which is quiet now, to improve its thermal

module. Thermal model. In drawing the water from the secondary coolant loop the ground was able to verify that the line was not frozen. There had earlier been some indication that perhaps the line might be frozen, but with the water having been drawn we verified the thermal model and set any fears that we may have had to rest. We are planning a Change-of-chift brieting starting at 7:00 p.m. central daylight time involving Phil Shaffer, who is the off-going Flight Director. And that briefing will take place in the news center briefing room. We'll keep the line up for this pass over the Ascension tracking station. Expect to have radio communication with the crew in about 15 seconds.

END OF TAPE

SL-II MC-949/1
Time: 17:30 CDT 20:22:30 GMT
6/13/73

CC Skylab, Houston. AOS at Ascension for 10 minutes.

CDR Houston, I see that tomorrow night is our go to bed early night.

CC That's affirm. We're gonna start to get you going to bed tomorrow evening, then wake you up early the next morning and then about another day and we'll be all set for the rest of the mission, as far as good night and hello time.

SPT Yeah, we may get up a little early tomorrow morning, otherwise we won't be sleepy when Houston says be sleepy. But other than that, it looks like a neat flight plan. I may show it to the excaptain to see if he approves of it.

CC Okay. You might also note -

SPT (garble)

CC You might also notice that tomorrow night you only get 7 hours sleep.

SPT That's about all we've been taking.

CC Understand.

CDR Some of these guys keep coming back late with the Command Module.

SPT Well, the first thing I was gonna do was good Navy nurses up here.

CC Skylab, Houston. We're a minute from LOS. We're gonna see you at Guam at 23:14. We got the CDPs detail on board. We'll get the other two up at Guam.

SPT The PLT says to hustle.

PAO The Skylab space station has moved beyond the range of the Ascension tracking site. We will acquire them again in about 30 minutes at the Guam tracking station. At 22 hours 41 minutes Greenwich mean time, this is Skylab Control.

END OF TAPE

SL-II MC-950/1
Time: 17:50 CDT 20:22:50 GMT
6/13/73

PAO This is Skylab Control, Houston, at 22 hours 51 minutes Greenwich mean time. The press conference that was - on the change of shift briefing that was announced earlier to begin at 7 p.m. central daylight time, appears now that we'll be able to start that at 6:30 p.m. with the off-going Flight Director Phil Shaffer. To repeat, change of shift briefing, 6:30 p.m. in the News Center Briefing Room in building 1. At 22 hours 52 minutes this is Greenwich mean - this is Skylab Control.

END OF TAPE

SL-II MC-951/1
Time: 18:13 CDT, 20:23:13 GMT
6/13/73

PAO This is Skylab Control, Houston, at 23 hours 13 minutes Greenwich mean time. A minute away from acquisition of the Skylab space station through the Guam site. We'll stand by for air-to-ground through Guam.

CC Skylab, Houston, AOS 10 minutes, Guam.

SC Hello, Houston.

SC Houston, PLT.

CC Go, PLT.

SC Okay, for ESC people, about an hour ago we had a mol sieve PCo2, OUT HIGH CAUTION. It happens to be on sieve B which is not active. It's reading - when I looked at it then it was reading about three parts IN and about four parts OUT.

CC We copy that.

SC Houston, SPT.

CC Go, SPT.

SC It says on my TM schedule TV downlinks about now. Does that really mean VTR or do you want it real time.

CC Stand by a half, Joe.

CC SPT, that is real time. The transmitter is still warmed up and we'll give you a GO on it.

SC Okey doke.

CC And, SPT, be advised we're GO on that now.

SC Okay.

CC PLT, Houston.

SC Go ahead.

CC Paul, if you haven't already done it on panel 207, you can inhibit the MOL Sieve B, PPCO2.

SC Yeah, we already did that Bill.

CC Copy.

END OF TAPE

SL-II MC-952/1
Time: 18:20 CDT 20:23:20 GMT
6/13/73

CC SPT, Houston.
SPT Go ahead.
CC On the coronagraph you should be able to see Saturn at fourth solar radii, southeast and it's moving west.
SPT Okay, four radii southeast, thank you, we'll look next time we get sunset.
SPT Houston, SPT. I think we had Mercury in the coronagraph a few days ago. Would you verify that? I saw something, I thought it was Mercury.
CC Okay.
CC Skylab, LOS in one minute. Vanguard AOS at 23:54. And we will be dumping the tape recorder at that time. Also, Joe, if it's convenient, there's no rush on this one, on panel 200, circuit breaker MDA/OWS heaters control 2, should close that at your convenience.
SPT (garble)
SPT Houston, the heaters control breaker 1 is already closed, we're closing 2.
CC Copy that.
PAO Communication with the Skylab space station has ended over the Guam tracking site. We will pick up the space station again at Vanguard in about 28 minutes. In the meantime we are ready to proceed with the change of shift briefing in the News Center briefing room with the off-going Flight Director Phil Shaffer. At 23 hours 25 minutes Greenwich mean time, this is Skylab Control.

END OF TAPE

SL-II MC-953/1
Time: 18:53 CDT 20:23:53 GMT
6/13/73

PAO This is Skylab Control Houston at 23 hours 53 minutes Greenwich mean time. We're about 60 seconds away from acquisition of the space station through the Vanguard tracking site, and following that pass, which will last about 10 minutes, we'll brush Ascension and go on up through the Canaries and the Madrid site. It is our intention to leave the line up from Vanguard through the Madrid site. And we're standing by for a call from Capcom.

SPT Houston, are you there?

CC Go Skylab.

CDR Hey Bill I tried to run that 553, and the first thing was that it didn't go the way it was supposed to go, and the stingers would retract from the bolt metal and the bolt metal would stay right there. It wouldn't go anywhere and we shut the gun down. That went on for about five of them, then I ran into problems again with the five KVAs. They have stuck on and right now nothing will turn it off except pulling the main bat breaker. And that's where we stand, so if they want to think about it, let me get two of them scheduled for tomorrow. If they want to think about it tomorrow and give me some stuff to do with it tomorrow, fine, if not, I believe that will be scratched. That's probably it.

CC We copy that Pete.

PLT Houston, PLT. You got a couple of minutes?

CC Go ahead, PLT.

PLT Okay, we're all of the opinion that we've not getting the flow out of the hot water heater in the waste management compartment that we did at first. Now I've checked the system. We got 35 PSI coming out of the (garble) so I checked that with a portable water bottle, and we got good flow out of the tanks feeding the portable water in the wardroom. And one time when we had a shower day, which was about 4 days ago, I guess, we filled the shower water bottle, and all we could get in it then was 20 pounds PSI, in the shower water bottle. Now, the malfunction procedures, don't really leave us any place, except changing the outlet fitting, which we haven't done yet. That's about where it stands. It's plenty satisfactory for us. What we didn't want is the next crew to get stuck with a system that didn't work and not the right parts on board. So any of that stuff you want us to look at, let us know in the next couple of days.

CC We copy that, Paul.

PLT Okay.

END OF TAPE

SL-II MC-954/1
Time: 18:58 CDT, 20:23:58 GMT
6/13/73

CC And Skylab, if it won't interfere with anything, there a couple of news notes here.
SC Oh, we're just sittin down to din-din. Go ahead with the news.
CC Okay, the President's going to speak this evening and outline a new economics controls. There's an indication that the policy will include strong action, but not a total freeze on wage and prices. Power cuts are continuing in Chicago and New York as a heat wave pushes temperatures to record highs. And the rains came again today in Houston. It's not raining at the moment, but we still have a severe thunderstorm watch. We've had 10 inches since Monday and tomorrow's forecast is 40 percent. And we have checked and you people have no problems with your houses and such. Joe won't need to add any water to his swimming pool for a day maybe. And the - -
SC Okay, thanks for checking.
CC - prices were down on the stock exchange today. Dow Jones 11-1/2 points down with an average share value down of 19 cents. There was an amended cease-fire agreement signed today in Paris and Kissinger's hoping that this agreement will finally bring about a true peace. The 1973 U.S. Open starts tomorrow in Oakmont, Pennsylvania, with Jack Nicklaus, the favorite, Arnie Palmer, and Snead also added.
SC Okay, thank you very much.
CC SPT, the astronomy experts here have checke and you shouldn't have been able to see Mercury a few days ago, you might follow that one up, Joe, and get a planet named after you.
SC Well, it must have been broken.
SC In fact it was probably my own planet (garble)
CC Roger.
SC That's the planet of the apes.
CC LOS in one minute, Ascension at 00:12, and as we mentioned, the flight plan's onboard. The details should be onboard, and the evening questions should be onboard by this time.
CC And correct that, the next AOS will be at Canary at 00:14.
SC Okay, and as soon as supper's over we'll start our homework.

END OF TAPE

SL-II MC-955/1
Time: 19:07 CDT, 21:00:07 GMT
6/13/73

CC Skylab, Houston, AOS for 10 minutes, Canary.
SC Roger, Houston.
CC And PLT, Houston.
SC Yep.
CC We'll be doing some unattended ATM experiment OPS. That'll be S055 at 02:00 G.m.t. This is for the crew rest period and they are not on the pad.
CC That's for information only.
SC All right. Thank you.
SC Have to request that you don't break anything.
CC Copy.
CC And will comply.
CC Skylab, LOS one minute, Guam 00:53.
SC You guys just pick out (garble) TV passes for us today. We've been over water and these lousy stations all day today. Will you guys change your orbit tomorrow?
CC We'll work on that Pete.
CC A lot of Houstonians been over water all day today.
SC (Laughter) It sure sounds like it.
PAO The Skylab space station has moved out of range of the Madrid tracking site. Next acquisition will be at Guam in 24 minutes, and at that time we should have the evening status report transmitted to us by the Commander. At 29 minutes into the new day, G.m.t. day, that is, this is Skylab Control.

END OF TAPE

PAO This is Skylab Control at 52 minutes Greenwich mean time. About 45 seconds from acquisition of the space station at the Guam tracking site. And we expect at that time that the Commander will give us a status report on the consumables that were used today. Food, photo and other consumables. We'll stand by for the call up from Capcom Bill Thronton.

CC Skylab, Houston. AOS 6 minutes Guam.

CDR Thank you, Houston.

CDR Ready for the TV (garble) on the coronagraph, Houston?

CC That's affirm.

CDR Well, you can have it.

CDR Houston, are you ready for the evening report?

CC That's affirm, Pete. We're standing by.

CDR Okay. The CDR ate everything plus two butter cookies. The SPT ate everything and had a half a salt and, excuse me, the CDR also had his 1-1/2 salt. And the PLT ate everything but his bread. He had 9 salt. And the photo log today: 164 16 millimeter; first line ETC prep, with the remark X-porter 03CX is probably not film. Charlie India 25, 67, Mike Tango 11, EREP rest of U.S. C I08, 00, C107;

CC We copy, Pete.

CDR Okay, the next one is EREP south US, South America, Charlie India 25, 00, Mike Tango, 05, and mark on Mike Tango 05, that that film is to be developed for exterior. M151-1 Charlie India 10, 5, Charlie India 08; M092/171, SPT, M151 Charlie India 10, 33, Charlie India 08; M553-1 Charlie India 05,60, Charlie India 08. In the 35 millimeter world and these are the correct numbers. I think I gave some bad ones last night. Charlie India 28, frames counted,22. Charlie India 29 is complete. Charlie India 30, 1 and 0 frames. 70 millimeter: Charlie X-Ray 06,099. ETC 378 (garble) is BW01, (garble) S27. EREP Set Papa is completed. Drawer A configuration, X-porter 02. Charlie India 05, 16. Charlie India 01. A2 is X-porter 03, Charlie India 06, 62, Charlie India 03. 83 is X-porter 06, Charlie India 10, 33, Charlie India 08. 84 is X-porter 05. There is no transport on it, no film. Charlie India 25 for takeup. Floating, Exporter 07, Charlie India 09, 100 percent, Mike Tango 03. There were no flight plan deviations. You're aware of the M553 problem. No stowage changes. That's it.

CC We copy, Pete.

CC PLT, Houston,

PLT Go.

CC We're seeing a flare in X-RFA now. That's just for info. We want you to continue as scheduled.
PLT Okay.
CC And CDR, Houston.
CDR Go ahead, Bill.
CC We sent up some questions in the genetal message EVA data on Pad 2024 today. If these were put on Channal B, could you give us an estimate about the time of day.
CDR No, I haven't got the questions yet, Bill let me get them and we can probably answer them for you in real time if you need them.
CC Okay, and that was yesterday's pad that they came up on.
CDR Oh. Okay, wait a minute. I'll have to look for those.
CDR I don't krow, you got the questions there? Ask me the questions.
CC Sorry, Pete, say again.
CDR Have you got the questions there? Ask me the questions. I got the thing filed someplace.
CC Yeah, I've got them, Pete. You want me to read them to you?
CDR Yeah, read me the first one.
CC Okay, clarification of previous question. Were EV 1 and 2 already in their suits, when EV 3 activated the SUS loops on page 1.2-9 of the EVA checklist.
CDR Yeah, we answered that last night. The way we remember it is Joe and I were suited, but we did not have the PCUs on and EV 3 activated the loops, which were attached to the PCUs and they were flowing when we put them on.
CC Okay, Pete, I'm sorry, you answered that one last night and that's the remaining five that we're after.
CDR Go ahead with the next one.
CC We are presently assuming that launch will be with suits off in the OWS between EVAs and you also confirmed that yesterday.
CDR I confirmed that we probably would not take the suits off. It's too much trouble.
CC We're going LOS here. We'll have you again at Honeysuckle at 01:04.
CDR Okay.
PAO We have a short period of time when we're out of communication with the spacecraft. About 3 minutes. So we'll just keep the line up and wait for the next call up from Capcom, Bill Thornton.

END OF TAPE

SL-II MC-957/1
Time: 2C:01 CDT, ?1:01:01 GMT
6/13/73

CC Skylab, Houston, AOS for four minutes.
CC PLT, Houston.
SC Go.
CC We need a STOP on S052 and STANDBY POWER.
CC Skylab, LOS in 45 seconds. We'll be AOS Canary with 01:52 in med-conference.
PAO We have had loss of signal with the Skylab space station through the Honeysuckle tracking site. We'll acquire again at the Canaries. At one hour nine minutes Greenwich mean time, this is Skylab Control.

END OF TAPE

SL-II MC-958/1
Time: 20:51 CDT, 21:01:51 GMT
6/13/73

PAO This is Skylab Control, Houston at one hour 51 minutes Greenwich mean time. The space station is about 45 seconds away from the Canary - Canary Islands tracking site. At this time there will be the daily medical conference. Following the Canary pass we'll acquire through the Madrid station, so we expect to get some live air-to-ground. We'll stand by for the call from the ground here up to the space station by Cap Com Bill Thornton.

SC Was that LOS, Houston?

CC Negative, Skylab. We still have about eight minutes here.

SC Okay, our poor surgeon got cut off prematurely then.

CC Want us to try to get him back on for you, Joe?

SC Yeah, would you please, Bill?

CC Wilco.

CC They say it's going to take a - -

CC It's in work. It's going to take a second to do it.

SC Okay.

CC Skylab, Houston. We have you for about three more minutes here. Be advised that we're configuring rate gyros for sleep, one and two on line, 3's backup.

SC Roger, ask the CDR if he wants me to give the answers to the evening questions on B channel.

CC Copy.

CC And offer my apologies to the CDR for bringing up last evening's questions again. That one slipped by. - -

SC He Did he give the same answers that he did last night?

CC He was doing pretty well as far as we went.

SC Okay.

SC It wasn't answering the questions twice, Bill. It was your interrupting me eating my butter cookies which is fatal to anybody up here in the spacecraft. Nobody's bothered me while I'm eating my butter cookies.

CC Yeah, those things save your life once in a while.

CC We're about ready to - someone bestowed the title of the "Butter Cookie Monster" on me in Smeat. We're about ready to give you that title now, Pete.

SC Yeah, I'm afraid I've taken it over.

SC Skylab has replaced Grand Rapids as the "Butter Cookie Capitol of the World".

CC Copy that.

SL-II MC-958/2
Time: 20:51 CDT, 21:01:51 GMT
6/13/73

SC Well, I'm the guy that kept telling everybody that I didn't think anybody was going to eat anything here, and I've been eating the whole spacecraft. Man, I can't get enough.

CC Very good.

SC But, I think you have (garble) due to the fact that we do a reasonable amount of physical work every day.

CC That's the most interesting of all. CDR, on this 553 problem, when you went to READY reset, did the READY light come on?

SC Yes, it does.

CC Copy, and one more. When you went to a READY reset do you remember whether the camera stopped running?

SC I can't answer that question, but it has been full of film.

CC Copy.

SC If you remember - well, he may not. Way, way, back at the beginning we gave a little briefing for the other crews that the cameras are extremely quiet up here in comparison to on the ground. They don't clatter around anywheres near like they do on the ground. And it's very difficult to tell when they're running.

CC We copy that. And we'll be LOS here in about a minute. We will have you again at Carnarvon at 02:32. Hey, Pete, would - be interested in any further comments on the relative amount of work you might be doing up there and what parts of the body are getting it?

SC Well, that's difficult to say, Bill. I think that the fact that you're like changing the tape recorder or something, you still have to brace yourself, but we do not have like triangles up there that you can relax in. So, you're continually bracing your legs or your arms or your body in some manner or another to do a task. Now, we're obviously not - still not coming anywhere near as close to a one-g output for a total day, by any means, but I think everybody also agrees up here. We look forward to getting on the bike and exercising because it really does make you feel good. Makes you - makes the ole blood pump and - I don't think anybody's missed a day on the bike (garble) And as I say there's other(static).

PAO And with that conversation on the amount of physical exercise engaged in by the Skylab crew, space station moved out of range at the Madrid site. And the air-to-ground slowly faded in an easterly direction. At two hours seven minutes Greenwich mean time, this is Skylab Control.

END OF TAPE

SL-II MC-959/1
Time: 21:22 CDT 21:02:22 GMT
6/13/73

PAO This is Skylab Control, Houston, at 2 hours 22 minutes Greenwich mean time. With information on tomorrow's Earth Resources pass, identified as EREP pass number 11, for June 14th. Incidentally, that pass will be a repeat of the same ground track that we started the series of Earth Resources passes. And tomorrow's pass is the last of this Skylab - of this current Skylab mission. The pass commences over Oregon, heads in a southeasterly direction over White Sands, over the Rio Grande Valley in south Texas, across Mexico, central American, Guatemala. In Guatemala, the Skylab team will attempt to photograph an active volcano using the S191 infrared spectrometer. The pass is approximately 7,000 statute miles in length, ending in the vicinity of Puerto Allegre, Brazil. We're about 8 minutes from acquisition at the Carnarvon site. We expect the crew to get their good night on this pass, which will take us over Carnarvon and also Honeysuckle. We'll take the line down now and come back up in roughly 8 minutes. At 2 hours 24 minutes Greenwich mean time, this is Skylab Control.

END OF TAPE

SL-II MC-960/1
Time: 21:32 CDT 21:02:32 GMT
6/13/73

PAO This is Skylab Control at 2 hours 31 minutes Greenwich mean time. 45 seconds from acquisition through the Carnarvon tracking site. We will stand by for radio communication with the crew, on what we expect to be the last pass before they get a good night.

CC Skylab, Houston. AOS for approximately 15 minutes.

SC Roger, Bill.

CC And, Pete, we have someone to go up to the CSM to turn off the ECS RAD heater secondary switch on panel 2. We show an increase CSM current that would correspond to this.

SC Okay, you want to turn off the heat - the secondary radiator heaters, right?

CC On the ECS, that's right, it's on panel 2.

CC PLT, Houston.

PLT Yes, sir.

CC You reported that a SOB2 OPERATE light was working nominally this morning. Has it continued to do that?

PLT Negative.

CC Copy.

SC Okay, Bill, the ECS radiator heater secondary is in fact off.

CC We were afraid that might be the case.

SC The primary heater's off too.

CC We copy.

SC Okay, what else we got that pulls that kind of current.

CC That's what we're looking at Pete, standby for a second.

SC Okay, I'm the only guy that was in here today. And, I powered up the secondary loop in accordance with your instructions and I don't believe I hit any other switches.

CC Copy.

SC Houston are you aware that the PLT turned the hydrogen heaters to AUTO today.

CC That's affirmative.

SC And the fans?

CC We copy.

END OF TAPE

SL-II MC-961/1
Time: 21:38 CDT 21:02:38 GMT
6/13/73

CC We're still looking here Pete.
CDR Okay.
CDR How much can you see, Houston? (garble)
CC 17 Pete.
CDR Seventeen amps?
CC And Pete, that's varying. That's not steady. It's a cyclic increase apparently.
CDR How long you been seeing it?
CDR Hey, Houston, CDR.
CC Go. CDR.
CDR The only thing I know that we activated was the H2 heaters and the H2 fans. How about if I cut them off one at a time. Maybe you got a short in something.
CC Standby Pete, we're -
CC Pete, would you turn those off and let us watch down here, please?
CDR Okay. H2 heater 1 AUTO going OFF.
CC Copy.
CDR Hey, did you see anything with 1 OFF?
CC Pete you can turn the fans off now.
CC Pete, we didn't see any abnormal changes on that. Could you bring them back to the original configuration?
CDR Okay. They're all on. H2 heaters to AUTO, and H2 fans to AUTO.
CC Copy.
SPT Hey Bill, the on board current indication out of the fuel cells are not out of line with what they've been for the past two weeks, on board.
CC We copy.
SPT Where there was 16 amps per fuel cell, with those hydrogen heaters and fans off, and when he turned them on it came up to about 20 amps per fuel cell.
CC We copy.
SPT You're also aware that we got the secondary coolant loop on - off.
CC We copy.
CDR Pete, we're seeing 17 amps. We can't explain. We'd like for you to back out of the secondary loop and that's 2031 Bravo message that's on board. And we're going LOS here in 30 seconds. We'll - for the bedtime.
CDR Okay. You want us to back out of the secondary loop deal. Right?
CC That is affirm.
CDR Okay. It didn't work. And again, for more information, Houston, there's no on board indication

SL-II MC-961/2
Time: 21:38 CDT 21:02:38 GMT
6/13/73

of anything being different. The (garble) indications are the same, and the oil flow to the fuel cells are the same as they've been.

CC — We copy. And we're seeing the same thing down here.

CC — We're seeing an intermittent 17 amp increase that we can't explain here is the reason for it.

PAO — The Skylab space station has moved out of range of Honeysuckle tracking site. At 2 hours 49 minutes Greenwich mean time, this is Skylab Control.

END OF TAPE

SL-II MC-962/1
Time: 22:04 CDT, 21:03:04 GMT
6/13/73

PAO This is Skylab Control, Houston at three hours four minutes Greenwich mean time. As the spacecraft left - or as the spacecraft was in communication with the Honeysuckle tracking station there was some air-to-ground relating to a spurious signal of approximately 17 amps, an intermittent signal that had been registering on an ECS - current on an ECS radiator heater in the command service module. Earlier today, the flight controllers here at Mission Control Center requested of the Commander, Pete Conrad, to check into the secondary coolant loop in the CSM in an engineering experiment which was designed to improve the CSM thermal model. Pete Conrad did and reported back that the coolant loop was operating well at that time. Subsequent to that, we discovered particularly on these last few passes, this intermittent spurious signal for which there was no explanation, so we asked the Commander to return to the CSM to verify that the switches were indeed in the OFF position. And the air-to-ground that followed indicated that the switches were, indeed, in the proper position. In as much as there was not a clear explanation as to why the spurious signal, the spurious intermittent signal, was showing up, we asked the crew to back-out, so to speak, or in another way, inactivate that secondary loop which had previously been active. And with that the crew then was given a good-night for the evening, so the spacecraft, or the CSM, essentially is in the mode that it was in days previous with the secondary loop inactive, and the primary loop active. We have the daily medical bulletin as written by Dr. Charles E. Ross. He writes: "The Science Pilot, Dr. Joseph Kerwin, performed complete physical examinations on the Commander and the Pilot, confirming that both are in good physical condition. Dr. Kerwin stated that these were red flight physicals since they were performed inflight. The crew feels very confident in their abilities to perform the remaining mission and we don't feel we have any problems. We don't anticipate any more conversation with the crew tonight, for they are in the pre-sleep activity and will probably be hitting the sack shortly. I have a correction with reference to the information on the EREP pass for tomorrow. We are - the crew will look for a cinder-cone in Nicaragua, Sierra Negro, Nicaragua, and not an active volcano in Guatemala as previously reported. At three hours nine minutes Greenwich mean time, at the end of mission day 20, this is Skylab Control.

END OF TAPE